

## A NOTE ON THE COLLECTION OF *Zanthoxylum rhetsa* — AN UNDER-UTILIZED TREE SPICE IN THE WEST COAST OF INDIA

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*Zanthoxylum rhetsa* is distributed in south western peninsular region of India and is an important local spice in Karnataka, Goa and Konkan region of Maharashtra. Although five samples collected have meagre morphological variation but significant difference in aroma was noticed. Its morphology and uses have been described in this communication.

**Key words:** *Zanthoxylum rhetsa*, 'Pimentase' West coast, Konkan, collection, Agro-forestry

A few out of the reported 80 species under the genus *Zanthoxylum* L. such as *Z. bungeanum* ('Chinese prickly as pepper' or 'Sechaug pepper'), *Z. rhetsa* DC (Portuguese 'Pimentase') and *Z. nitidum* and a few others are used as medicinal and aromatic, spice and as insect repellents respectively. The genus is tropical to subtropical in distribution. A total of 20 species occur in India. *Z. rhetsa* synonymous to *Z. oblongatum* Wall., *Fragaria rhetsa* Roxb. and *F. budrunga* Roxb. in part is distributed in South Western peninsular region of India and is an important local spice in the Uttar Kannada of Karnataka, Goa and Konkan region of Maharashtra. Fruit is an important source of essential oil - 'mullilam oil' which is used in indigenous system of medicines, perfumes and flavourings. Seeds are medicinal, astringent, stimulant and digestive. The tree bark is anthelmintic. The biochemical and pharmaceutical properties of the oil extracted from its seeds have been extensively treated (Wlth. India, 1950). *Z. oxyphyllum* is used as a condiment in Assam. Its importance as a medicine is well documented. Kirtikar & Basu (1975) described

various medicinal uses of the species in detail. In coastal and inland areas of Goa and Maharashtra, people use mature fresh and dry fruits in fish preparation. Fresh fruits in bunches kept for sale is a common site in local haats and weekly markets during October and November. As a bio-pesticide, village farmers keep the fruits in between gunny bags containing either paddy or hulled rice for better storage of the grains. In Kerala, collected seeds are marketed outside the state for factories engaged in manufacture of biopesticide formulations. Its wood is also used as timber for furniture and for carvings. The present note pertains to survey and collection of 5 accessions of *Z. rhetsa* from Kerala, Maharashtra and Karnataka.

### Etymology

Owing to its local importance as a spice and as a medicinal plant, the tree is known by about 62 names in different Indian and foreign languages. Mainly, it is called as 'Tirphal', 'Triphal', 'Chiphal', 'Chirphala', 'Kokli', 'Sessal', 'Tejbala', 'Tisal', 'Tisul' and 'Tripani' in Marathi and Konkani,

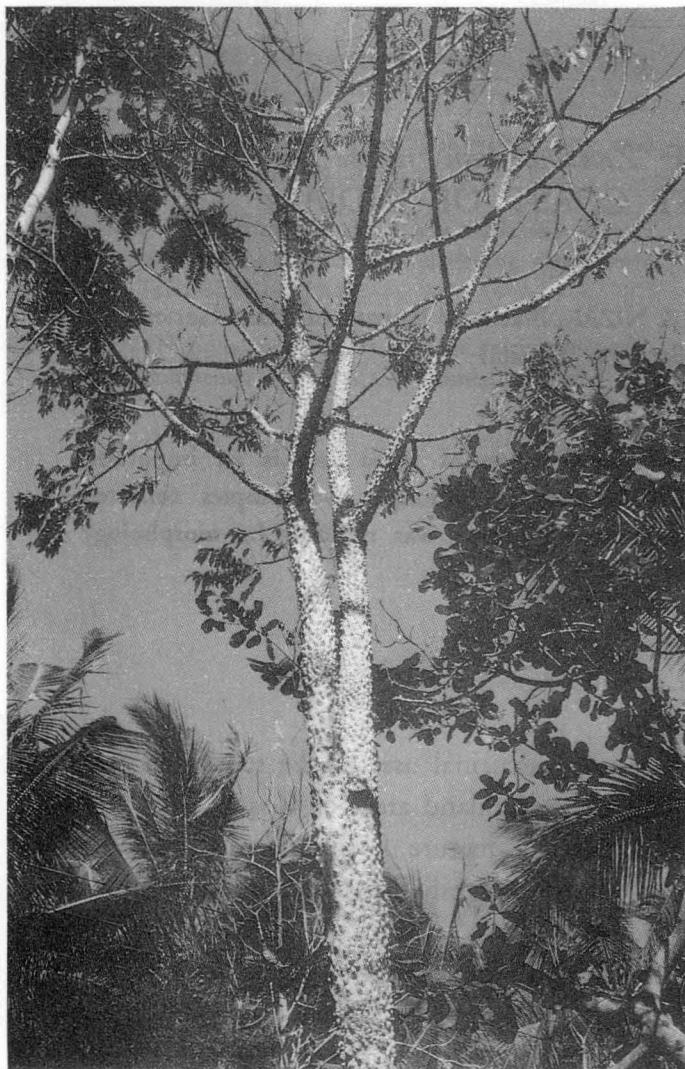


Fig. 1. *Zanthoxylum rhetsa* tree in the forest habitat

'Ashvagra' and 'Atitejani' in Sanskrit, 'Mullilam', 'Kujitti', and 'Mulakila' in 'Malayalam', 'Bicholin', 'Satave', 'Arimadalu', 'Aremapala', 'Jimmini', 'Jummene' and 'Sesele' in Canarese; 'Racha' and 'Rachamam' in Telugu and 'Pimentase' in Portuguese.

#### Exploration and collection

An extensive area between  $10.5^{\circ}$  and  $11.7^{\circ}$ N latitude covering the coastal plains, undulating midlands and hilly mountainous tracts in Northern Kerala, Dakshin Kannada and Uttar Kannada, Coorg and Shimoga districts of Karnataka, Goa and Ratnagiri, Sinddurg and Kolhapur districts

of Maharashtra was surveyed under a multicrop collection trip with an objective to collect mainly the wild crop relatives and other useful plant species. A total of 5 samples of *Z. rhetsa* comprising 1 from Konkan in Maharashtra, 2 from Uttar Kannada and two from Kerala were collected. It is partially a shade loving tree and occurs widely in disturbed habitats around village hamlets. The tree was noticed sporadically in almost all areas covered upto 200m elevation. Absolutely no variability was noticed in the morphology of the species, however, differences in aroma was distinct between collections from Konkan region and those from Kerala.

#### Morphology

It is a lofty deciduous tree; height 10-15 m, diameter of the trunk 45 cm, canopy 4-6 m, bark 15-20 mm thick, brown, white mottled, armed with conical woody prickles; outer bark dead, corky, pale yellow, inner bark sulphur yellow. Branches fully covered with very sharp spines. leaves alternate, are clustered at the tips of branchlets, 30-35 cm long, simply imparipinnate, leaflets in 7-12 pairs, petioles 3-6 mm long, blade  $9-12 \times 5-6.5$  cm, broadly lanceolate, tip acuminate, base asymmetric, margin entire, lateral nerves 6-12 pairs, glabrous. Pedicel gland dotted. Flowers polygamous in terminal armed paniculate cymes, 2-3 mm across, greenish yellow. Fruits 5-6 mm in size, are single seeded globose capsules and dehisce at maturity. Fruit of 1-4 cocci, purplish, highly aromatic, gland dotted, pungent. Seeds globose, black, shining, endocarp horny, hang out of the wall and albumen fleshy.

#### Uses

Its use as a spice in Konkan region probably is a very ancient practice by the fishermen folk. The present status of its importance in the locality will have to be highly strengthened and diversified by developing it from the level of an

undomesticated and under utilised species to the level of an important agri-horti species suited to agro-forestry systems in coastal areas of the South Western peninsula. The priority, of course, lies in exploration, collection, identification of variable types, conservation, utilization and value addition on systematic and scientific basis. The plant is also shade loving and as an agroforestry species Spines on the tree is a disadvantage for easy harvesting and for other management practices.

#### ACKNOWLEDGEMENTS

The authors are grateful to Dr. P.L. Gautam, Director, NBPGR, N. Delhi for facilities provided and encouragement given for these studies.

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